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January 3, 2012

Mike Monasmith
Compliance Project Manager
Systems Assessment & Facility Siting Division
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814

Subject: Air Quality Letters to Docket
Hidden Hills SEGS Project (11-AFC-02)

Dear Mr. Monasmith:

Please find attached the following correspondence re Air Quality that needs to be submitted to Dockets:

- Revised Authority to Construct Forms dated December 19, 2011
- Email correspondence between Nancy L. Matthews of Sierra Research and Jon Becknell of Great Basin Unified Air Pollution Control District regarding Auxiliary Boilers dated December 31, 2011.

Thank you for adding these documents to the record.

Sincerely,
CH2M HILL

A handwritten signature in blue ink, reading "John L. Carrier".

John L. Carrier, J.D.
Program Manager

Encl.

DOCKET

11-AFC-2

DATE JAN 03 2012

RECD. JAN 03 2012



BrightSource

December 19, 2011

Mr. Jon Becknell
Air Quality Specialist II
Great Basin Unified Air Pollution Control District
157 Short Street
Bishop, CA 93514-3537

Subject: BrightSource Energy Hidden Hills Solar Electric Generating Station
Revised Authority to Construct Forms

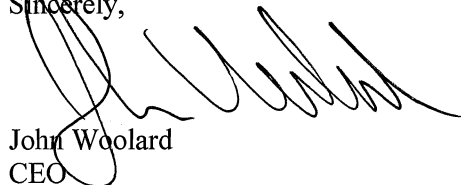
Dear Mr. Becknell:

Based on recent discussions between our air quality consultants, Sierra Research, and the District, we understand that the District will issue three separate Authorities to Construct (ATCs) for the Hidden Hills Solar Electric Generating Station (HHSEGS) equipment to reflect the separate ownership of the solar plants and joint ownership of the shared facilities. On behalf of BrightSource Energy, Inc., we are submitting the enclosed revised application forms (three A-1 Forms) to reflect the separate ownership of equipment for Hidden Hills Solar I, LLC and Hidden Hills Solar II, LLC, and equipment owned jointly by both entities. It is also our understanding that the District concurs with the appropriate nature of combining the emissions and impacts from both solar plants and therefore, the remainder of the application forms are still acceptable and the completeness determination will stand for both plants.

We have included a check for \$200 to cover the filing fees for the two additional application forms.

Thank you for your time and consideration in this matter. If you have any questions regarding this application, please contact Nancy Matthews of Sierra Research at (916) 273-5124 or Gary Kazio of BrightSource Energy, Inc., at (702) 726-6749.

Sincerely,



John Woolard
CEO

BrightSource Energy, Inc., sole member and manager of
Hidden Hills Solar I, LLC and Hidden Hills Solar II, LLC

Enclosures

cc: Duane Ono, Deputy APCO
Clay Jensen, BSE

BRIGHTSOURCE ENERGY, INC.

(510) 550-8161
1999 HARRISON STREET, SUITE 2150
OAKLAND, CA 94612

Great Basin Unified Air Pollution Control District
157 Short Street
Bishop, CA 93514-3537



Great Basin Unified Air Pollution Control District

Section A-1	Authority To Construct / Permit To Operate Application	General Information
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Reason for Application (Check one)	<input checked="" type="checkbox"/> New Source	<input type="checkbox"/> Modification to Existing Source	<input type="checkbox"/> Change of Ownership
------------------------------------	--	--	--

- A. Section A-1, pages 1 & 2 must be filled out COMPLETELY for EACH article, machine, equipment, contrivance or secondary source requiring a permit.
- B. A FILING FEE of \$100.00 paid by check, or money order must accompany EACH application.

1. Permit to be issued to:

HIDDEN HILLS SOLAR I, LLC

2a. Mailing Address:

c/o BrightSource Energy, Inc. 1999 Harrison Street, Suite 2150	Oakland	CA	94612
Street or PO Box	City or Town	State	Zip Code

2b. Billing Address, if different from mailing address:

(same)			
Street or PO Box	City or Town	State	Zip Code

3. Type of Organization:

<input type="checkbox"/> Corporation	<input type="checkbox"/> Individual Owner	<input checked="" type="checkbox"/> Partnership	<input type="checkbox"/> Government Agency
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4. Person to Contact on Air Pollution Matters:

Clay Jensen	Development Manager	(702) 556-0600	cjensen@brightsourceenergy.com
Name	Title	Telephone Number	Email address

5. Exact Source Location – Include Name and Location (County or City):

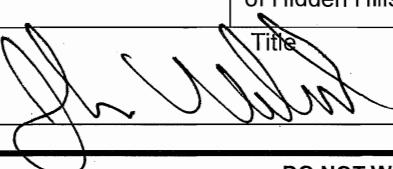
Approximately 18 miles south of the town of Pahrump, Nevada, along the California-Nevada border, in Township 22 North, Range 10 East, Sections (or portions thereof) 15, 16, 20, 21, 22, 23, 26, 27, and 28 (San Bernardino Base and Meridian)
--

6. Pursuant to the provisions of the Health and Safety Code of the State of California and the Rules and Regulations of the Great Basin Unified APCD, application is hereby made for and AUTHORITY TO CONSTRUCT/PERMIT TO OPERATE the following article, machine, equipment, contrivance or secondary source:

3 Natural Gas-Fired Auxiliary Boilers (Reference Numbers: B1A, B2A, B3A) 1 Natural Gas-Fired Start-up Boilers (Reference Number: B4A) 1 Emergency Diesel Generator (Reference Number: EG1A) 1 Fire Pump Engine (Reference Number: FP1A)
--

7. Owner or Certified Official:

John M. Woolard	Chief Executive Officer of BrightSource Energy, Inc, sole member and manager of Hidden Hills Solar I, LLC	(510) 550-8464	jwoolard@brightsourceenergy.com
Name	Title	Telephone Number	Email address

8. Signature:  Date: 12/19/11

DO NOT WRITE BELOW (APCD USE ONLY)

Date Received Stamp	Application Number	Filing Receipt	Fee Schedule	Received By



Great Basin Unified Air Pollution Control District

Section A-1	Authority To Construct / Permit To Operate Application		General Information
9. Person Completing Form: Nancy Matthews (Sierra Research)		Date: Revised 12/9/11	Email address: nmatthews@sierraresearch.com
10. List the Products Manufactured and/or Services Performed at this Facility:			
Electricity Generation			
11. Complete the dates applicable to your planned project, estimating dates as closely as possible.			
MILESTONES	STARTING DATE	COMPLETION DATE	
Site Selection	--	3 rd quarter of 2010	
Design and Specs	--	Ongoing	
Construction Contract Let	1 st quarter of 2013	3 rd quarter of 2015	
New Source Construction	2 nd quarter of 2013	2 nd quarter of 2015	
Modification of Existing Equip.	N/A	N/A	
Final Source Emission Testing	3 rd quarter of 2015	3 rd quarter of 2015	
Transfer of Location	N/A	N/A	
Transfer of Ownership	N/A	N/A	



Great Basin Unified Air Pollution Control District

Section A-1	Authority To Construct / Permit To Operate Application	General Information
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Reason for Application (Check one)	<input checked="" type="checkbox"/> New Source	<input type="checkbox"/> Modification to Existing Source	<input type="checkbox"/> Change of Ownership
------------------------------------	--	--	--

A. Section A-1, pages 1 & 2 must be filled out COMPLETELY for EACH article, machine, equipment, contrivance or secondary source requiring a permit.

B. A FILING FEE of \$100.00 paid by check, or money order must accompany EACH application.

1. Permit to be issued to:

HIDDEN HILLS SOLAR II, LLC

2a. Mailing Address:

c/o BrightSource Energy, Inc. 1999 Harrison Street, Suite 2150	Oakland	CA	94612
Street or PO Box	City or Town	State	Zip Code

2b. Billing Address, if different from mailing address:

(same)			
Street or PO Box	City or Town	State	Zip Code

3. Type of Organization:

<input type="checkbox"/> Corporation	<input type="checkbox"/> Individual Owner	<input checked="" type="checkbox"/> Partnership	<input type="checkbox"/> Government Agency
--------------------------------------	---	---	--

4. Person to Contact on Air Pollution Matters:

Clay Jensen	Development Manager	(702) 556-0600	cjensen@brightsourceenergy.com
Name	Title	Telephone Number	Email address

5. Exact Source Location – Include Name and Location (County or City):

Approximately 18 miles south of the town of Pahrump, Nevada, along the California-Nevada border, in Township 22 North, Range 10 East, Sections (or portions thereof) 15, 16, 20, 21, 22, 23, 26, 27, and 28 (San Bernardino Base and Meridian)

6. Pursuant to the provisions of the Health and Safety Code of the State of California and the Rules and Regulations of the Great Basin Unified APCD, application is hereby made for and AUTHORITY TO CONSTRUCT/PERMIT TO OPERATE the following article, machine, equipment, contrivance or secondary source:

3 Natural Gas-Fired Auxiliary Boilers (Reference Numbers: B1B, B2B, B3B)
1 Natural Gas-Fired Start-up Boilers (Reference Number: B4B)
1 Emergency Diesel Generator (Reference Number: EG1B)
1 Fire Pump Engine (Reference Number: FP1B)

7. Owner or Certified Official:

John M. Woolard	Chief Executive Officer of BrightSource Energy, Inc, sole member and manager of Hidden Hills Solar II, LLC	(510) 550-8464	jwoolard@brightsourceenergy.com
Name	Title	Telephone Number	Email address

8. Signature: _____

Date: _____

12/19/11

DO NOT WRITE BELOW (APCD USE ONLY)

Date Received Stamp	Application Number	Filing Receipt	Fee Schedule	Received By



Great Basin Unified Air Pollution Control District

Section A-1	Authority To Construct / Permit To Operate Application	General Information
9. Person Completing Form: Nancy Matthews (Sierra Research)		Date: Revised 12/9/11 Email address: nmatthews@sierraresearch.com
10. List the Products Manufactured and/or Services Performed at this Facility: Electricity Generation		
11. Complete the dates applicable to your planned project, estimating dates as closely as possible.		
MILESTONES	STARTING DATE	COMPLETION DATE
Site Selection	--	3 rd quarter of 2010
Design and Specs	--	Ongoing
Construction Contract Let	1 st quarter of 2013	3 rd quarter of 2015
New Source Construction	2 nd quarter of 2013	2 nd quarter of 2015
Modification of Existing Equip.	N/A	N/A
Final Source Emission Testing	3 rd quarter of 2015	3 rd quarter of 2015
Transfer of Location	N/A	N/A
Transfer of Ownership	N/A	N/A



Great Basin Unified Air Pollution Control District

Section A-1	Authority To Construct / Permit To Operate Application	General Information
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Reason for Application (Check one)	<input checked="" type="checkbox"/> New Source	<input type="checkbox"/> Modification to Existing Source	<input type="checkbox"/> Change of Ownership
------------------------------------	--	--	--

- A. Section A-1, pages 1 & 2 must be filled out COMPLETELY for EACH article, machine, equipment, contrivance or secondary source requiring a permit.
- B. A FILING FEE of \$100.00 paid by check, or money order must accompany EACH application.

1. Permit to be issued to:

HIDDEN HILLS SOLAR I, LLC and HIDDEN HILLS SOLAR II, LLC
--

2a. Mailing Address:

c/o BrightSource Energy, Inc. 1999 Harrison Street, Suite 2150	Oakland	CA	94612
Street or PO Box	City or Town	State	Zip Code

2b. Billing Address, if different from mailing address:

(same)			
Street or PO Box	City or Town	State	Zip Code

3. Type of Organization:

<input type="checkbox"/> Corporation	<input type="checkbox"/> Individual Owner	<input checked="" type="checkbox"/> Partnership	<input type="checkbox"/> Government Agency
--------------------------------------	---	---	--

4. Person to Contact on Air Pollution Matters:

Clay Jensen	Development Manager	(702) 556-0600	cjensen@brightsourceenergy.com
Name	Title	Telephone Number	Email address

5. Exact Source Location – Include Name and Location (County or City):

Approximately 18 miles south of the town of Pahrump, Nevada, along the California-Nevada border, in Township 22 North, Range 10 East, Sections (or portions thereof) 15, 16, 20, 21, 22, 23, 26, 27, and 28 (San Bernardino Base and Meridian)
--

6. Pursuant to the provisions of the Health and Safety Code of the State of California and the Rules and Regulations of the Great Basin Unified APCD, application is hereby made for and AUTHORITY TO CONSTRUCT/PERMIT TO OPERATE the following article, machine, equipment, contrivance or secondary source:

1 Emergency Diesel Generator (Reference Number: EG1C) 1 Fire Pump Engine (Reference Number: FP1C)
--

7. Owner or Certified Official:

John M. Woolard	Chief Executive Officer of BrightSource Energy, Inc, sole member and manager of Hidden Hills Solar I, LLC and Hidden Hills Solar II, LLC	(510) 550-8464	jwoolard@brightsourceenergy.com
Name	Title	Telephone Number	Email address

8. Signature:  Date: 12/19/11

DO NOT WRITE BELOW (APCD USE ONLY)

Date Received Stamp	Application Number	Filing Receipt	Fee Schedule	Received By



Great Basin Unified Air Pollution Control District

Section A-1	Authority To Construct / Permit To Operate Application	General Information
9. Person Completing Form: Nancy Matthews (Sierra Research)		Date: Revised 12/9/11 Email address: nmatthews@sierraresearch.com
10. List the Products Manufactured and/or Services Performed at this Facility: Electricity Generation		
11. Complete the dates applicable to your planned project, estimating dates as closely as possible.		
MILESTONES	STARTING DATE	COMPLETION DATE
Site Selection	--	3 rd quarter of 2010
Design and Specs	--	Ongoing
Construction Contract Let	1 st quarter of 2013	3 rd quarter of 2015
New Source Construction	2 nd quarter of 2013	2 nd quarter of 2015
Modification of Existing Equip.	N/A	N/A
Final Source Emission Testing	3 rd quarter of 2015	3 rd quarter of 2015
Transfer of Location	N/A	N/A
Transfer of Ownership	N/A	N/A

Nancy L. Matthews

From: Nancy L. Matthews
Sent: Saturday, December 31, 2011 11:07 AM
To: 'Jon Becknell' (jbecknell@gbuapcd.org)
Cc: Nancy L. Matthews; Gary Rubenstein
Subject: HHSEGS Auxiliary boilers question

Importance: High

Hi, Jon-- Here is an answer to your question below regarding the planned auxiliary boiler operation for Hidden Hills SEGS.

BSE expects to start the auxiliary boilers each summer weekday and shut down each evening (see Section 5.1.4.2, p. 5.1-36), so the boilers won't be on standby overnight. When they start up each morning, the starts will be warm so they will come into compliance (at 25% load) quickly enough that they won't require any separate emissions allowances besides the proposed 3 hour averaging period for normal operations. Cold starts would occur only when the boilers have been shut down for an entire weekend or longer, which is why BSE expects that they will require only about 8 cold startups per year. We request that you do not limit the number of cold startups per boiler per year, however—as long as the boilers comply with their maximum hourly, daily and annual limits, we would ask that the number of annual startups remain unlimited.

Note also that emissions and fuel use are calculated based on equivalent full-load hours—however BSE expects that the boilers may operate more hours at lower loads. For example, each boiler could operate 800 hours per year at 50% load (or, less realistically, 1200 hours at 33% load) while consuming the same quantity of fuel and producing the same total emissions as if it operated 400 hours at 100% load. (800 hours ÷ 7 hrs/day = 114 days, which is approximately equal to the 120-day operating window) (Because the auxiliary boilers are expected to have a turndown ratio of 4:1, they will be able to meet the ppm and lb/MMBtu emission rates in Table 5.1-22 down to about 25% load.)

If you have any other questions about this or any other aspect of the project, please do not hesitate to call.

Happy new year!

Nancy Matthews
Sierra Research
1801 J Street
Sacramento, CA 95811
nmatthews@sierraresearch.com
916-273-5124 (direct)
916-444-6666 (main)
916-444-8373 (fax)

From: Jon Becknell [<mailto:jbecknell@gbuapcd.org>]
Sent: Tuesday, December 20, 2011 4:44 PM
To: Nancy L. Matthews
Subject: Auxiliary boilers question

Nancy,

I have created a spreadsheet to validate the pollutant emissions and have matched pretty much all of the boiler criteria pollutant rates, based on exhaust flow rates at different operating modes and the corresponding concentrations (taken

presumably from mfg. performance charts or tables). The assumptions for the operation of the auxiliary boilers are eluding me though.

- On page 5.1-37 and in Table 5.1-20, it is stated that the equivalent full-load operation for each auxiliary boiler will be 400 hours per year.
- Based on the daily heat input of 21,000 MMBtu in Table 5.1-20, each auxiliary boiler would be used up to 7 equivalent full-load hours per day.
- This would imply that the boilers are operated $400 \div 7 = 57$ days (out of the 120-day operating window).
- On page 5.1-41, it states that there will only be 8 cold startups per auxiliary boiler per year.
- This would seem to imply that there would be considerably more hot & warm standby hours (including overnight?).

Straighten me out; I'm confused. How many standby hours are there?

I'm also leaving on vacation until January 3rd, so no hurry on the reply. Merry Christmas & happy New Year!

Jon Becknell

Air Quality Specialist II

Great Basin Unified Air Pollution Control District

157 Short St, Bishop, CA 93514 (760) 872-8211

<http://www.gbuapcd.org>



**BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
COMMISSION OF THE STATE OF CALIFORNIA
1516 NINTH STREET, SACRAMENTO, CA 95814
1-800-822-6228 – WWW.ENERGY.CA.GOV**

**APPLICATION FOR CERTIFICATION
FOR THE *HIDDEN HILLS SOLAR ELECTRIC
GENERATING SYSTEM PROJECT*
HIDDEN HILLS SOLAR HOLDINGS, LLC**

DOCKET NO. 11-AFC-2

PROOF OF SERVICE
(Revised 12/22/2011)

APPLICANT

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swiley@brightsourceenergy.com

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sgp@eslawfirm.com

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e-recipient@caiso.com

Great Basin Unified APCD
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Deputy Air Pollution Control Officer
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DECLARATION OF SERVICE

I, Mary Finn, declare that on, January 3, 2012, I served and filed copies of the attached Hidden Hills SEGS Revised Authority to Construct Forms & Auxiliary Boilers Response, dated January 3, 2012. The original document, filed with the Docket Unit or the Chief Counsel, as required by the applicable regulation, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at: [www.energy.ca.gov/sitingcases/hiddenhills/index.html].

The document has been sent to the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit or Chief Counsel, as appropriate, in the following manner:

(Check all that Apply)

For service to all other parties:

- x Served electronically to all e-mail addresses on the Proof of Service list;
- Served by delivering on this date, either personally, or for mailing with the U.S. Postal Service with first-class postage thereon fully prepaid, to the name and address of the person served, for mailing that same day in the ordinary course of business; that the envelope was sealed and placed for collection and mailing on that date to those addresses **NOT** marked "e-mail preferred."

AND

For filing with the Docket Unit at the Energy Commission:

- x by sending an original paper copy and one electronic copy, mailed with the U.S. Postal Service with first class postage thereon fully prepaid and e-mailed respectively, to the address below (preferred method); **OR**
- by depositing an original and 12 paper copies in the mail with the U.S. Postal Service with first class postage thereon fully prepaid, as follows:

CALIFORNIA ENERGY COMMISSION – DOCKET UNIT
Attn: Docket No. 11-AFC-2
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energy.state.ca.us

OR, if filing a Petition for Reconsideration of Decision or Order pursuant to Title 20, § 1720:

- Served by delivering on this date one electronic copy by e-mail, and an original paper copy to the Chief Counsel at the following address, either personally, or for mailing with the U.S. Postal Service with first class postage thereon fully prepaid:

California Energy Commission
Michael J. Levy, Chief Counsel
1516 Ninth Street MS-14
Sacramento, CA 95814
mlevy@energy.state.ca.us

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, that I am employed in the county where this mailing occurred, and that I am over the age of 18 years and not a party to the proceeding.



Mary Finn, CH2M Hill